APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/088,737	06/02/1998	RYUZO KOANA	862.2339	2096

5514   7590   12/20/2001

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ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 12/20/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on __Oct 5, 2001__

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1, 4-6, 8-16, 19-21, and 23-35_ is/are pending in the applica

    4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1, 4-6, 8-16, 19-21, and 23-35_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a)☒ All b) ☐ Some* c) ☐None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: _____

DETAILED ACTION

Claim Objections

1.   Claim 32 is objected to because of the following informalities: a semi-colon is missing at

line 8, claim 32, after " apparatuses", and at line 12, a period instead of a comma should be used

after "said selecting step" because it is the end of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use
> or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claim 32 is rejected under 35 U.S.C. 102(b) as being anticipated by Lobiondo (U.S.

Patent # 5,287,194).

Regarding claim 32: Lobiondo teaches a memory medium storing program code (memory

of print server that is storing the scheduler's software program, column 3, lines 35-50) for

controlling a data processing apparatus (print server 60, column 3, line 41) which includes

connection means (25, fig. 1column 3, lines 24-25) for being connected to a plurality of image

output apparatuses, (printers 10, column 3, line 25) the program code comprising the steps of

obtaining first data (print job information, column 3, lines 35-50) associated with an image

output job, the first data being designated by an operator; (user, column 3, line 56) obtaining

second data (capability and availability of printer 10, column 3, lines 64-68, column 4, lines 1-

15) associated with each of the plurality of image output apparatuses; selecting (scheduling print

jobs to one or more printers, column 3, lines 40-50) an image output apparatus, based on the first

and second data, from the plurality of image output apparatuses; and assigning (allocating print

job to printers, column 4, lines 58-61) the image output job to the image output apparatus

selected in the selecting step.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 4, 5, 8, 12-15, 16, 19, 20, 23, 27-31, and 33-35 are rejected under 35

U.S.C. 103(a) as being unpatentable over Lobiondo (U.S. Patent # 5,287,194) in view of Behera

(U.S. Patent # 5,187,750).

Regarding claims 1, 16, 30, 31, 33, 34, and 35: Lobiondo teaches a data processing

apparatus (server 60, column 3, lines 40-50) having connection means (25, fig. 1, column 3, line

25) for being connected to a plurality of image output apparatuses, (printers 10, column 3, line

25) comprising: first obtaining means (the function of scheduler 50 that is obtaining print job

information from workstation, column 3, lines 35-50) for obtaining first data associated with an

image output job, the first data being designated by an operator; (user, column 3, line 54) second

obtaining means (the function part of the scheduler 50 that is obtaining printer information,

column 3, lines 64-69, column 4, lines 1-15) for obtaining second data associated with each of

the plurality of image output apparatuses; selection means (the function part of the scheduler 50

that is scheduling print jobs to one or more printers, column 3, lines 40-50) for selecting an

image output apparatus, based on the first data and the second data, (column 3, lines 40-50) from

the plurality of image output apparatuses; and job assigning means (the function part of the

scheduler 50 that is allocating print job to printers, column 4, lines 58-61) for assigning the

image output job to the image output apparatus selected by the selection means, wherein, in a

case where the first data designated by the operator designates to select an image output

apparatus which completes execution of the image output job in a shortest time, (column 4, lines

50-55), the selection means selects an image output apparatus from among the plurality of image

output apparatuses which can perform an output operation in the shortest time (column 4, lines

50-60) based on second data for each of the respective image output apparatuses.

Lobiondo does not teach the second data indicates a time required by each of the image

output apparatuses to output one page of an output job, and a number of pages for output jobs in

each of the image output apparatuses which have not yet been output.

Behera, in the same area of printing pages of document using printers, teaches that the time for a printer to print pages of document is calculated by using: a time required by each of the image output apparatuses to output one page of an output job; (90 PPM, column 13, line 4) and a number of pages for output jobs in each of the image output apparatuses which have not yet been output/to be printed (column 13, lines 15-30).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lobiondo to include: in the second data, a time required by each of the image output apparatuses to output one page of an output job, and a number of pages for output jobs in each of the image output apparatuses which have not yet been output.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lobiondo by the teaching of Behera because of the following reasons: (a) it would have allowed the printing system to accurately predict which image output apparatus that can print the print job in the shortest time.

Regarding claims 4, and 19: Lobiondo teaches selection means comprises confirmation means (the function part of the scheduler that is responsive to the capability and availability of each printer) for confirming a function of each of the plurality of image output apparatuses connected the connection means, and selects (3, lines 40-50) the image output apparatus having the function to perform an output operation corresponding to the first and second data.

Regarding claims 5, and 20: Lobiondo teaches wherein the confirmation means confirms the function of each of the plurality of image output apparatuses by referring to a memory column 4, lines 1-15) which stores, in advance, data indicative of the function of each of the plurality of image output apparatuses connected by the connection means.

Regarding claims 8, and 23: Lobiondo teaches display means (column 6, line 21) for displaying a message regarding an execution state of the image output job assigned to each of the plurality of image output apparatuses connected by the connection means (column 5, lines 10-25, column 6, lines 10-21).

Regarding claims 12, and 27: Lobiondo teaches wherein in a case where there are plural image output apparatuses which can perform an output operation (the printer with full print queue, column 5 line 31, and the different printer that can print the print job, column 5 line 28) corresponding to the first and second data, the selection means selects one of the plural image output apparatuses based on priorities (use selected print location, column 5, line 18) set in advance.

Regarding claims 13 and 28: Lobiondo teaches in a case where there are plural image output apparatuses which can perform an output operation (the printer with full print queue, column 5 line 31, and the different printer that can print the print job, column 5 line 28) corresponding to the first and second data, the selection means allows an operator to select one of the plural image output apparatuses (column 5 line 25-35).

Regarding claims 14 and 29: Lobiondo teaches where the first data designates plural output forms, (column 4, lines 49-50), the selection means selects an image output apparatus which can perform an output operation in all of the plural output forms (column 4, lines 45-61).

Regarding claim 15: Lobiondo teaches an image output system (fig. 1) comprising the data processing apparatus (60, fig. 1) according to claim 1 and a plurality of image output apparatuses (10, fig. 1, column 3, lines 20-35) connected to the data processing apparatus by the connection means (25, column 3, line 25)

6.   Claims 6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobiondo in view of Behera as applied to claims 4, and 19, and further in view of Shibusawa et al. (U.S. Patent # 6,088,120)

Regarding claims 6, and 11: Lobiondo in view of Behera do not teach wherein the confirmation means confirms the function of each of the plurality of image output apparatuses by communicating with each of the plurality of image output apparatuses connected by the connection means.

Shibusawa, in the same area of selecting a printer to print according to user inputted print attributes, teaches a confirmation means, (physical printer managing means, column 3 line 20-28) confirms the function of each of the plurality of image output apparatuses by communicating with each of the plurality of image output apparatuses connected by the connection means (column 3 line 20-30, column 4 line 35-40).

Therefore, it would have been obvious to a person having ordinary skill in the at the time the invention was made to have modified Lobiondo in view of Behera to use the confirmation means for confirming the function of each of the plurality of image output apparatuses by communicating with each of the plurality of image output apparatuses connected by the connection means.

It would have been obvious to a person having ordinary skill in the at the time the invention was made to have modified Lobiondo in view of Behera by the teaching of Shibusawa because of the following reasons: (a) to receive the changes of attribute information, such as paper type, of the printers, as taught by Shibusawa at column 4 line 35-40, column 5 line 15-30; (b) updating the changes of attribute information of printers would provide an accurate printer profiles; and (c) in order to confirm the functions of each of the printers by communicating with each of the plurality of printers so that network is updated and the user would know each function of each printer in the network environment.

7.   Claims 9 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobiondo in view of Behera as applied to claims 1, and 16, and further in view of Barry et al. (U.S. Patent # 5,859,711).

Regarding claims 9, and 24: Lobiondo in view of Behera do not teach wherein in a case where the first data further designates to select an image output apparatus capable of a color

image output, the selection means confirms function of each of the image output apparatuses and select an image output apparatus which can perform the color image output.

Barry et al. teaches where data designates to select an image output apparatus capable of a color image output, (column 14 line 1-15, column 14 line 64-68) an image output apparatus which can perform the color image output is selected.

Therefore, it would have been obvious to a person having ordinary skill in the at the time the invention was made to have modified Lobiondo in view of Behera to include: in a case where the first data further designates to select an image output apparatus capable of a color image output, the selection means confirms function of each of the image output apparatuses and select an image output apparatus which can perform the color image output.

It would have been obvious to a person having ordinary skill in the at the time the invention was made to have modified Hower, Jr. et al by the teaching of Barry et al. because of the following reasons: (a) a cost saving would be achieved since it is cheaper to print black and white pages on a black and white printer than it is to print on a color printer, as taught by Barry et al. at column 14 line 39-45; (b) it is faster to print black and white pages on a black and white printer than it is to print on a color printer, as taught by Barry et al. at column 14 line 9-15.

Regarding claim 24: Hower, Jr. et al. does not teach wherein in a case where the first data designates to select an image output apparatus capable of a color image output in the selecting step, a function of each of the image output apparatuses is confirmed, and an image output apparatus which can perform the color image output is selected.

Barry et al. teaches where data designates to select an image output apparatus capable of a

color image output, (column 14 line 1-15, column 14 line 64-68) an image output apparatus

which can perform the color image output is selected.

Therefore, it would have been obvious to a person having ordinary skill in the at the time

the invention was made to have modified Hower, Jr. et al. to include: where the first data

designates to select an image output apparatus capable of a color image output in the selecting

step, a function of each of the image output apparatuses is confirmed, and an image output

apparatus which can perform the color image output is selected.

It would have been obvious to a person having ordinary skill in the at the time the

invention was made to have modified Hower, Jr. et al by the teaching of Barry et al. because of

the following reasons: (a) a cost saving would be achieved since it is cheaper to print black and

white pages on a black and white printer than it is to print on a color printer, as taught by Barry et

al. at column 14 line 39-45; (b) it is faster to print black and white pages on a black and white

printer than it is to print on a color printer, as taught by Barry et al. at column 14 line 9-15.

8.   Claims 10, 11, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lobiondo in view of Behera as applied to claims 1, and 16, and further in view of Hower, Jr. et

al. (U.S. Patent # 5,467,434).

Regarding claims 10, and 25: Lobiondo in view of Behera do not teach wherein in a case

where the first data further designates to select an image output apparatus capable of printing on

both sides of a recording medium, the selection means confirms a function of each of the plurality of image output apparatuses connected by the connection means and selects an image output apparatus which can perform the printing on both sides of the recording medium.

Hower, Jr. et al., in the same area of selecting printers for printing based on printer option availability, teaches in a case where a first data (programming selections, column 4 line 53-54) designates to select an image output apparatus capable of printing on both sides (duplex of column 8 line 42) of a recording medium, a selection means (program step of fig. 8) confirms a function of each of the plurality of image output apparatuses connected by the connection means and selects an image output apparatus which can perform the printing on both sides of the recording medium (column 6 line 5-50).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lobiondo in view of Behera to include: in a case where the first data further designates to select an image output apparatus capable of printing on both sides of a recording medium, the selection means confirms a function of each of the plurality of image output apparatuses connected by the connection means and selects an image output apparatus which can perform the printing on both sides of the recording medium.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lobiondo in view of Behera by the teaching of Hower, Jr. et al. because of the following reasons: (a) it would have prevented users from sending a duplex printing job to a printer that does not perform duplex printing; and (b) it would have allowed

duplex print job to be sent to printers that can perform duplex printing and thereby, prevent the

waste of communication bandwidth for transmitting print job to printers that is not capable of

printing the print job.

Regarding claims 11, and 26: Lobiondo in view of Behera do not teach wherein in a case

where the first data further designates a size of an output image, the selection means confirms a

function of each of the plurality of image output apparatuses connected by the connection means

and selects an image output apparatus which can perform an output operation in the designated

size.

Hower, Jr. et al., in the same area of selecting printers for printing based on printer option

availability, teaches in a case where the first data (programming selections, column 4 line 53-54)

designates a size of an output image, (page size, column 6 line 4) the selection means (program

step of fig. 8) confirms a function of each of the plurality of image output apparatuses connected

by said connection means and selects an image output apparatus which can perform an output

operation in the designated size (column 6 line 5-50).

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Lobiondo in view of Behera to include: in a case

where the first data further designates a size of an output image, the selection means confirms a

function of each of the plurality of image output apparatuses connected by the connection means

and selects an image output apparatus which can perform an output operation in the designated

size.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lobiondo in view of Behera by the teaching of Hower, Jr. et al. because of the following reasons: (a) it would have prevented users from sending a size of an output image in a printing job to a printer that cannot print the size of the output image in the print job; and (b) it would have allowed a size of an output image in a printing job to be sent to printers that can print the size and thereby, prevent the waste of communication bandwidth for transmitting print job to printers that is not capable of printing the print job.

Response to Arguments

9.   Applicant's arguments with respect to claims 1, 4-6, 8-15, 19-21, 23-35 have been considered but are moot in view of the new ground(s) of rejection. The newly added limitations submitted by applicant in the response of 10/2/2001 are met by the stated rejections as discussed above.

Action is Final, Necessitated by Amendment

10.   Applicant's amendment necessitated the new ground of rejection presented in this office action. Therefore, THIS ACTION IS MADE FINAL. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTHS shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to King Y. Poon whose telephone number is (703) 305-0892 or to Supervisor

Mr. David Moore whose phone number is (703) 308-7452.

December 17, 2001

DAVID MOORE
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